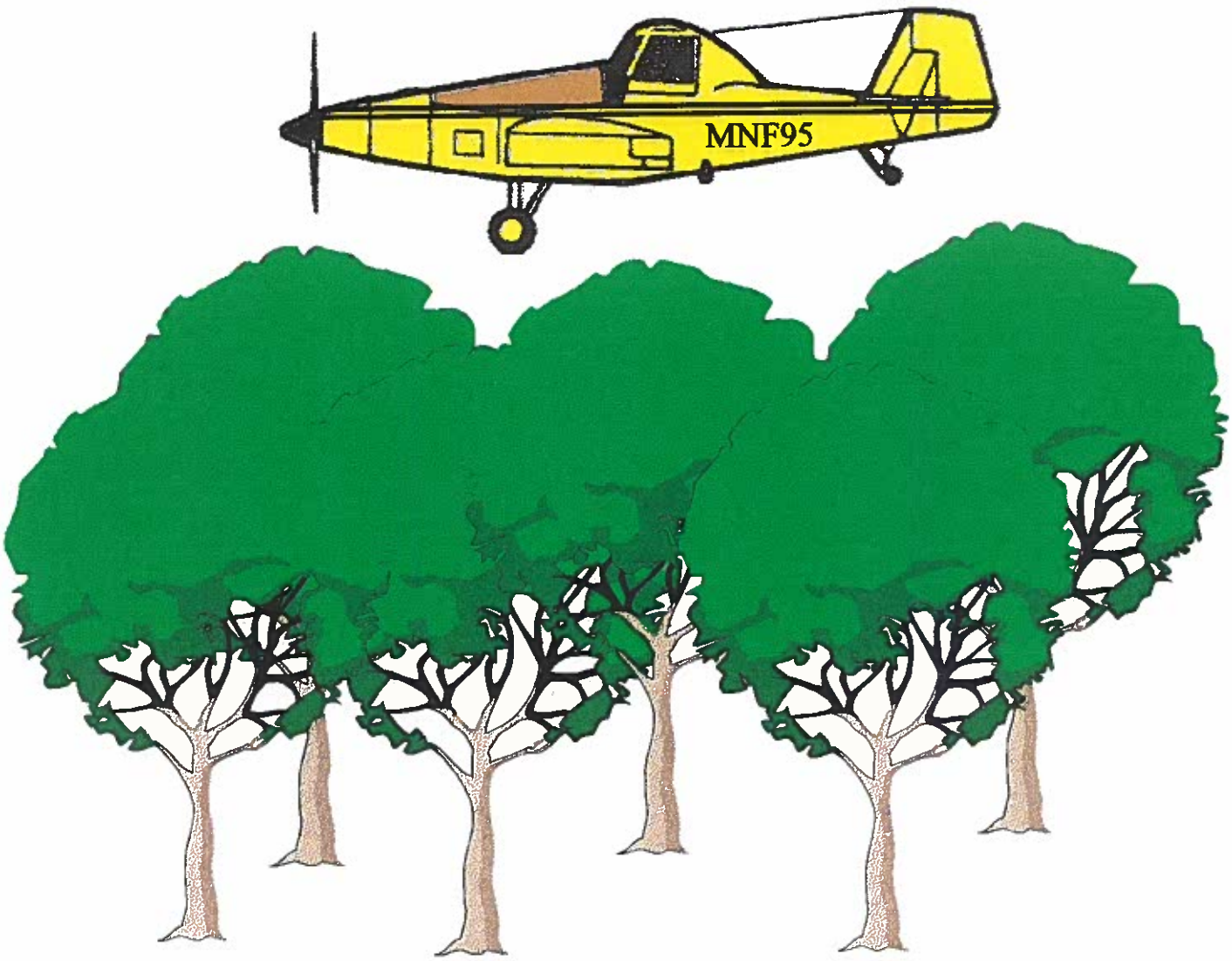
FELTON

Monongahela National Forest
Region 9



Gypsy Moth Suppression Project
Operations Health and Safety Plan
1995

MONONGAHELA NATIONAL FOREST
GYPSY MOTH SUPPRESSION PROJECT

OPERATIONS HEALTH AND SAFETY PLAN
1995

TABLE OF CONTENTS

		PAGE
00.0	INTRODUCTION	1
10.0	GENERAL SAFETY	1
	Pesticides	1
	Foot Travel	2
	Vehicle Travel	2
	Aircraft	2
20.0	BIOLOGICAL HAZARDS	3
	Gypsy Moth	3
	Stinging Insects	3
	Biting Insects	3
	Poison Ivy	3
	Poisonous Snakes	4
	Animals	4
30.0	FIRST AID	4
40.0	REPORTING ACCIDENTS AND INCIDENTS	5
50.0	PROJECT INFORMATION	6

APPENDICES

A	OPERATIONS PROCEDURE FOR EMERGENCIES	7
B	AIRCRAFT PRE-ACCIDENT PLAN OUTLINE	8
C	COUNTY EMERGENCY MANAGEMENT SERVICES	9
D	ORGANIZATIONAL CHART	11
E	ADMINISTRATIVE TELEPHONE NUMBERS	12
F	COMMUNICATIONS	14
G	JOB HAZARD ANALYSIS	15
H	TOXICOLOGY PROFILE	17
I	ELKINS AIRPORT	23
J	PROJECT MAP WITH HAZARDS AND HOSPITALS	26
K	DISTRIBUTION OF PLAN	31

00.0 INTRODUCTION

This Safety Plan is specific for the aerial application of the pesticides Bacillus thuringiensis (Bt); and, Nucleopolydedrosis Virus (NPV), commonly known as GYPCHEK, toward the suppression of gypsy moth on the Monongahela National Forest. The goals of this Health and Safety Plan are to:

Eliminate all avoidable accidents.

Create and maintain a positive attitude in all employees toward personal health and safety.

Promote safety awareness, responsibility, and accountability.

Identify and eliminate hazardous conditions wherever possible.

Regardless of how thorough this Health and Safety Plan may appear, each person on the project should be constantly alert to detect any unsafe practices and provide immediate corrective action to eliminate or deter these acts. This is a Health and Safety Plan as well as a Project Work Plan detailing operational and organizational procedures.

10.0 GENERAL SAFETY

Hazards associated with this project are briefly addressed below. More specific information is included in the Appendices and in the Health and Safety Code, FSH 6109.11. Review the Job Hazard Analysis (JHA) with the work crew at the beginning of the project and use it as a guide for tailgate sessions which should be held each day. This project is not a familiar one and new people are involved. Encourage safety procedure improvement suggestions from co-workers and act on these suggestions. If the idea was not implemented, give reasons why.

Injuries can occur in a fraction of a second. Take every precaution necessary to eliminate any hazards that you see and safeguard our employees and the public.

JOB HAZARD	HSC HANDBOOK PAGES
Vehicle Traveling	11 - 21
Accident Reporting	4 - 8
Foot Travel	36 - 37
Back-Country Travel	37 - 39
Protective Equipment & Clothing	61 - 63, and 127 - 129
Plant and Animal Hazards	262 - 267
Environmental Hazards	267 - 271

PESTICIDES

In general, the spray materials used for this project have low to no toxicity to humans, but unnecessary contact with these materials should be avoided. Also, some people are hypersensetive to certain compounds. Personnel should not be employed who have known hypersensitity to compounds being used. Check the Material Safety Data Sheet in Appendix H to learn the compounds used, and their potential hazards. The crew supervisors should be informed of any allergies or medicines a crew member has so that in the event of an emergency, the supervisor can alert an EMT or physician and better administer aid to the person. Since symptoms of pesticide poisoning

vary depending on exposure, an individual feeling abnormal in any way should report immediately to the on-site project supervisor.

The health and safety precautions to be followed when using pesticides includes:

Washing hands with soap and water immediately after contact with chemicals before handling food or tobacco substances. DO NOT EAT, DRINK, OR SMOKE WHILE USING PESTICIDES!

Washing work clothes daily and changing to clean clothing when not on duty.

Ensuring that mixing, loading, and application crews have eye protection and dust masks available for use.

FOOT TRAVEL

Field crews will constantly be traveling by foot to reach spray blocks and put up balloons; and this may be done at near dark conditions early in the morning. Be prepared to deal with blisters, fatigue, falling, brush, disorientation, briers, fences (electric and barbed).
Field supervisors need to be certain that permission has been granted and then notify private landowners in advance of crossing their land.

VEHICLE TRAVEL

Always use **defensive** driving techniques and limit speeds to those appropriate to the vehicle and the road you are traveling. Drive only on roads that are appropriate for the vehicle you are driving. You won't save time if you get stuck or have an accident to avoid a half mile walk. Wear your seatbelts at all times while the vehicle is in motion. When driving on forest roads and during dawn or dusk, turn your headlights on so you can be easier seen by other motorists. Watch out for deer, there are many in the area and are most active at dusk and dawn.

AIRCRAFT

Though aircraft are located in areas of greater control, caution is still required to stop intruders or trespassers in the area of operation. **NO UNAUTHORIZED PERSONNEL WILL BE AROUND THESE AIRCRAFT UNLESS THEY HAVE GAINED PERMISSION FROM THE CONTRACTOR. NEVER WALK AROUND AN AIRCRAFT WHILE THE PROPELLERS ARE IN MOTION AND NEVER APPROACH THE AIRCRAFT UNTIL IT HAS COME TO A COMPLETE STOP AND THE PILOT CAN SEE YOU. THE DANGER ZONE AROUND THESE AIRCRAFT IS THE PROPELLER AREA. NO EMPLOYEE, OTHER THAN THE GROUND CREW, SHALL BE WITHIN 150 FEET OF AN AIRCRAFT WHEN THE ENGINES ARE OPERATING. THE PILOT AND CREW ARE FOCUSED ENTIRELY ON PREFLIGHT CHECKLISTS, AIRCRAFT INSTRUMENTS, RAMP PROCEDURES & TRAFFIC, AND RADIO COMMUNICATIONS. THE PILOT HAS PLENTY TO DO THAN TO BE CONCERNED WITH FOREST SERVICE PERSONNEL.**

AVIATION SAFETY MEASURES

1. Operations Area will be cordoned off and signed "authorized personnel only" and "no smoking".

2. No spectators will be allowed in the fenced off area, without approval, from the Operations Center at the Airport.

3. Smoking will not be permitted within 50 feet of any fueling or loading operations.

4. Approach or leave aircraft only when authorized by pilot or base manager.

5. Crash\rescue equipment at the Elkins-Randolph Airport is very limited. However, response time for the Elkins fire department and EMS is less than 5 minutes.

6. All personnel at the airport should be familar with the shut-off valves on all the insecticide tanks. Personnel at the airport should also know where the absorbent spill material is located. In the event of a spill, deploy the absorbent material to soak up the spill. The used absorbent material should then be disposed at an approved landfill. Spilled insecticide should never be washed down any drains.

7. Prior to the start of the project, there will be a pilots safety briefing to discuss known flight hazards such as power lines, radio towers, military training routes, other suppression projects in the area, etc.

20.0 BIOLOGICAL HAZARDS

ALLERGY TO GYPSY MOTHS

It is often not known that a person has an allergy to gypsy moth until exposed to an epidemic population. This exposure is unavoidable while working in these populations. Though normally not serious, the possibility should be made clear to employees who are assigned to this project. An allergy usually manifests itself as a red rash, and can be minimized by wearing long clothing and protecting the collar area and wrist/ankle areas. Treat the area with antihistamine lotion. Also, in dense populations of decaying moths, the hairs can become airborne and then inhaled causing discomfort. Respirators can relieve this situation. If a person knows that he or she has this allergy, they are responsible for notifying their supervisor immediately so that they can be reassigned. If a person learns during the project that they have an adverse reaction of any type related to the moth, reassignment shall take place.

STINGING INSECTS

Make your co-workers aware of any allergies you have to bee stings and make sure they know where your antidote is kept. Keep an eye out for hornets constructing nests and stay clear of them. A bee sting can be fatal.

BITING INSECTS

Ticks, deer flies and mosquitoes will be the major pests on this project. This nuisance can be minimized by wearing long clothing and using proper insect repellant.

POISON IVY

Learn to identify the plant then try to avoid it. If unavoidable, you should wear long clothing and watch where you are walking, sitting, or reaching. Ointments can be used to lessen the effects of poison ivy. Wash exposed areas of your skin and wash your clothes separately, the oil from the plant is the irritant.

POISONOUS SNAKES

Watch out for rattlesnakes and copperheads on warm exposed spots, especially along timber roads, or stream banks. Wear high boots and chaps or heavy, loose fitting pants, and look before stepping over logs or climbing hand over hand on rocks.

ANIMALS

Give domestic and wild animals a wide berth, particularly if they have young nearby. It is also possible that the wildlife you come upon may have rabies, so don't go near or attemp to touch them. If they are sickly or losing hair or frothing at the mouth, stay clear.

30.0 FIRST AID

NOTE: If involved in an accident that results in death, injury, illness, and/or property damage, consult FSM 6730 "ACCIDENT REPORTING AND INVESTIGATION", for appropriate reporting and investigation procedure. The site of the accident shall immediately be quarantined off from all personnel to include the public, other unauthorized government employees, contract personnel, and all other unauthorized personnel until investigators on site have completed the accident investigation. **At an aircraft crash site, the National Transportation Safety Board (NTSB), has officially stated and declared that all crash sites are considered contaminated and injuries inflicted from debris could be fatal, based from HIV & Hepatitis B research reports. It is very critical that these sites be handled with the utmost care from the time of the accident until the properly-clothed investigators arrive at the site. The least disturbed the crash site remains, the easier it becomes to investigate the cause. The area to be quarantined shall not be less than 300 ft in diameter (length of a football field) and encompasses the entire wreckage. If the wreckage is in an elongated pattern, use engineer ribbon to secure the area from sightseers.**

In the event that an accident should occur, follow these procedures in order of priority and you will have done all you can:

1. Administer first aid if the injury is such that you can do so immediately. Use Personal Protective Equipment while trying to stop any bleeding and place the injured victim in as relaxing a position as possible. Check the breathing continuously as you transport the victim out of the area. If help is needed, contact via radio, the closest available unit to you for assistance.

2. In the event of a snake bite, try to remain calm and get the victim to a hospital within an hour. Light restriction above the bite may be helpfull.

3. Contact your work supervisor as soon as possible. Supervisor should have information of each crew menbers emergency data including home phone #, and who to contact in event of emergency, as well as allergy information, blood type, etc.

4. Transport the victim to the nearest hospital and try to get word to the medical facility that you will need their services and give them a summary of the situation. Also notify the Ranger so contact can be made to the injured person's family if needed and advise them of the injury and where the injured person is going for medical treatment.

5. Once at the hospital and the injured person is received by medical personnel, you should notify the District Office of the situation. Document the situation by time and event for future health care records. This will help you recall the incident/accident better after the excitement has settled.

6. Stay at the hospital until you are notified by medical personnel that you can go. If the injured person is discharged from the hospital, take the patient back to the District Office or to their home, whichever is appropriate.

7. In the event of a pesticide incident, such as swallowing or splashing in the eye, you should follow the label directions. The Material Safety Data Sheets (MSDS) for the compounds in use are included in Appendix H.

8. Don't forget the paperwork! Fill out a CA-1 and any other necessary reporting forms within 24 hours of the accident to receive health care benefits.

9. This situation doesn't stop here! Review the situation and take corrective action to avoid similar actions in the future by sharing the cause/effect of the situation with others during the project. An After Action Review (AAR) is most advantageous for those of us who are still working the project.

40.0 REPORTING ACCIDENTS AND INCIDENTS

Pesticide accidents and incidents must be followed by written report, giving as applicable, the facts according to the reporting outline prescribed in FSH 2109.12, Chapter 50, 52-1 through 52-3.

Motor Vehicle Accidents - Within five working days of the accident, forms (SF-91, SF91A, the Accident Investigation Form) and damage estimates need to be completed and submitted to the Office Manager.

Reports of accidents and incidents must include the following facts:

Location of accident or incident.

Ownership of property involved.

Chemical involved: common name, quantity of pesticide involved.

Weather conditions at time of accident or incident.

Vegetation and animal species involved.

If humans were involved, obtain a written statement from the attending physician.

Description of accident or incident including events immediately preceding and relating to the accident or incident.

Local, State, and other Federal agencies notified of accident or incident.

Action taken to coordinate corrective measures with other agencies.

Take corrective action to avoid silmilar actions in the future.

50.0 PROJECT INFORMATION

Each evening the Operations Dispatcher will post the accomplishments and the days work area on the DG mailing list titled: GM 95. This list shall include: DISTRICTS, GL, J.PAGE, K.GOODRICH, S.C.SMITH:S24L08A, R.ACCIAVATTI:S24L08A, R.WHITEMAN:S24L08A, P. RUSH:S24L08A, MAILROOM:D3, M.SAINTLOUIS, M.HERTH, N.FEAKES:D5, and W.WOODLAND:D1.

APPENDIX A

OPERATIONS PROCEDURE FOR EMERGENCIES

Notification procedures should follow standard operating procedures. The on-site project supervisor initiates notification as follows:

Initial contact:
PROJECT OPERATIONS CENTER -
who notifies:
PROJECT LEADER - GARY BUSTAMENTE
Situation and Action:

GROUND VEHICLE All Accidents	Secure the site, administer first aid, contact State Police, notify employees supervisor (District Ranger-Forest Supervisor), do not move vehicles), begin report SF91.
AIRCRAFT	See Appendix B for an outline of the Pre-Accident Plan.
30 Min. Overdue	Call FAA in Elkins, they will contact other aircraft and airports in the area.
60 Min. Overdue	FAA will begin a search.
Confirmed Down	Project Leader notifies local emergency services (911) to begin action then notify FAA. FAA will notify Flight Standard District Office to begin investigation. Observation aircraft should locate and circle the site and contact Elkins Flight Service Station (FAA Emergency Locator Transponder (ELT) is 121.5

APPENDIX B

AIRCRAFT PRE-ACCIDENT PLAN OUTLINE

Project Aviation Dispatcher (Petersburg)
Elkins-Randolph County Airport--Operations Center
POC: Mike Ledden, Scott Wells, Tim Scherm
Tele: 636-~~7240~~ 0087 (Unlisted: 636-8175)

Project Aviation Safety Officer (Petersburg)
Operations Center
POC: Mike Ledden, Gary Bustamente
Tele: 636-~~7240~~ 0087 (Unlisted: 636-8175)

Forest Aviation Officer (Elkins)
MNF Supervisor's Office
POC: Mike Ledden
Tele: 304-636-1800

Regional Aviation Safety Officer (Milwaukee)
Eastern Region, R-9
POC: Greg Frederick
Tele: 414-297-3744

FAA Local Flight Service (Elkins)
Automated Flight Service
POC: Watch Supervisor
Tele: 304-636-4812

Military Traffic Route Initiating/Scheduling Office
FAA Elkins
POC: Watch Supervisor
Tele: 304-636-4812

Airports:
Elkins-Randolph County Airport 636-~~4872~~ 2926

APPENDIX C

COUNTY EMERGENCY MANAGEMENT SERVICES IN PROJECT AREA:

COUNTY	COUNTY COMMUNICATIONS CENTER	WITHIN COUNTY USE	TELEPHONE NUMBER
Barbour	Barbour Commmunication Center	911*	304-457-5167
Grant	Grant Communication Center		304-257-1212
Pendleton	Franklin Nursing Home County Warning Point Franklin Emergency Services Director		 304-358-7911 304-358-2157
Preston	Kingwood Communication Center		304-329-1611
Pocahontas	Marlington Communication Center	911*	304-799-4445
Randolph	Elkins Communication Center Elkins Fire Department		304-636-2000 304-636-3412 or 304-636-3433
Tucker	County Dispatch Center	911*	304-478-2121
Webster	County Warning Point Webster Springs Sheriff's Office		 304-647-7911

* Dial 911 within the county to get the Emergency Services Center
(These are the only counties that have 911 in effect as of March 1995)

Calls to the services listed below may be made directly, or by going through the EMS Coordination Centers listed above.

HOSPITALS
Davis Memorial Hospital
Reed St.& Gorman Ave.
Elkins, WV 26241
304-636-3300

MEDICAL CLINIC
Tucker Co. Emergency Center
307 Main St.
Parsons, WV 26287
304-478-2511

Grant Memorial Hospital
Petersburg, WV 26847
304-257-1026

Pocahontas Memorial Hospital
Marlinton, WV
304-799-7400

Ruby Memorial Hospital
Morgantown, WV
304-598-4000

Fire Departments

Circleville	567-2323
Elkins	636-3412
Franklin	348-7911
Harman	227-4500
Marlinton	799-4211
Parsons	478-4949
Petersburg	257-1221

WV State Police

Randolph County	637-0200
Tucker County	478-3101
Pendleton County	257-1411
Pocahontas County	799-4101

Federal Law Enforcement

USDA/Forest Service (Elkins)	636-1800
US Marshal (Elkins)	636-0332
Bureau of Alcohol, Tobacco & Firearms (Charleston)	304-346-8103
Fed Bureau of Investigation (Pittsburgh)	412-471-2000
US Secret Service (Pittsburgh)	412-644-3384

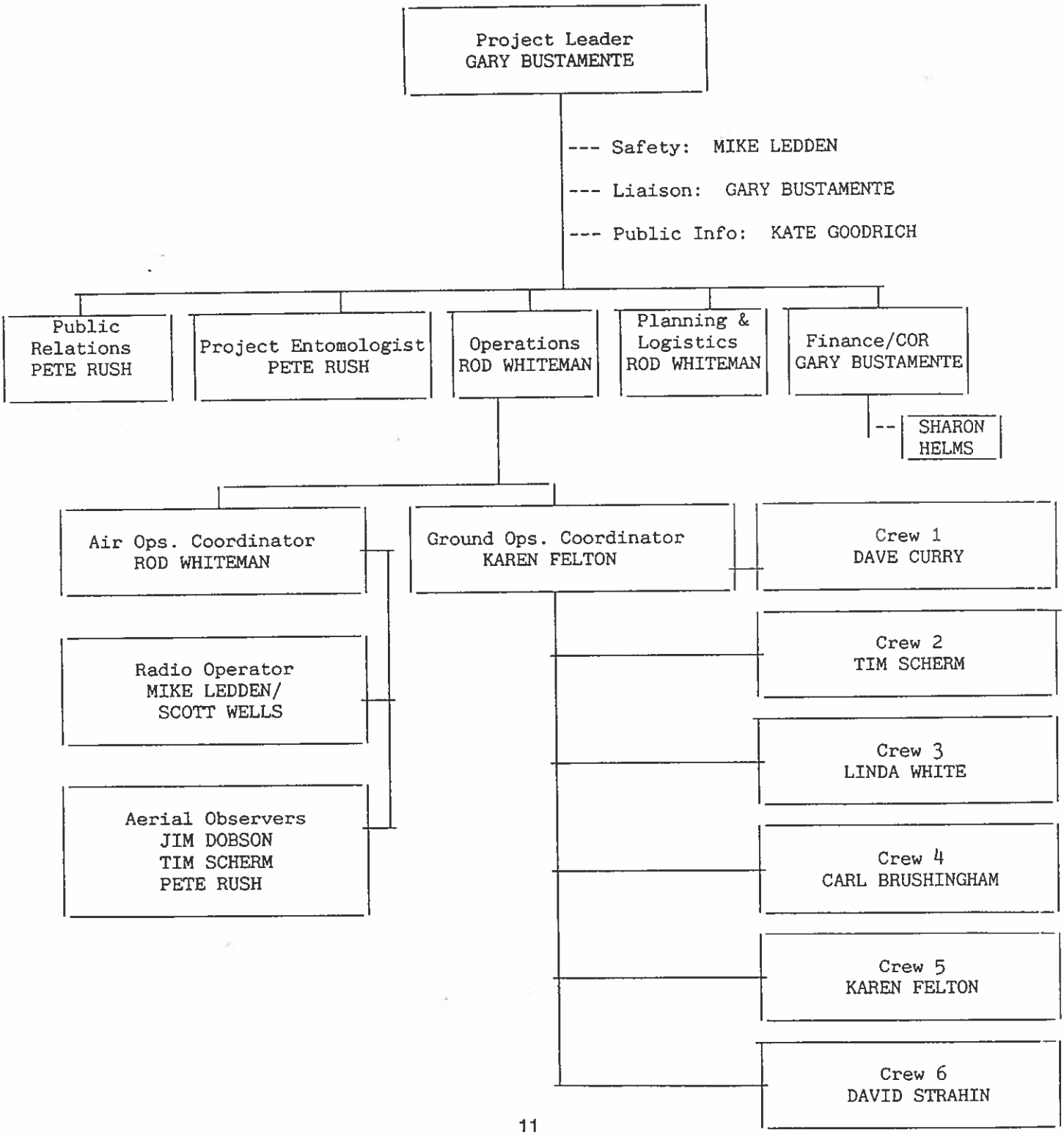
POISON CONTROL CENTERS

Call 1-800-642-3625
Pittsburgh Poison Center 412-681-6999

WV SPILL INFO HOTLINE
1-800-642-3074

APPENDIX D

ORGANIZATIONAL CHART



800-433-3273
874 194 1517 7312

APPENDIX E

Revised 04/14/95

ADMINISTRATIVE PHONE NUMBERS

A			
	Robert Acciavatti	292-0036	
	Robert Adams (WV Pesticide Investigator)		285-3215
	Airport Operations	636-~~7240~~ 0087	FAX 304-636-1875 (SO)
	Airport "Unlisted"	636-8175 ←	
	Art Medium	636-6820	(Brad)
B			
	Temple Bowen, Novo Rep.	203-790-2632	FAX 203-790-2611
	Carl Brushingham	636-4576	
	Gary Bustamente	636-4620	
C			
	Charlie Coffman	588-2212	FAX 304-558-2435
	Charleston Flt. Stds.	347-5199	
	Charleston Weather Service	347-5201/5202	
	Cheat Ranger District	478-3251	
	Dave Curry	456-3497	
D			
	Jim Dobson	296-6606	
E			
	Elkins Airport Mgr. (John Loftis)	636-2726	FAX 636-8210
	Elkins Best Western	636-7711 ←	
	Elkins Econolodge	636-5311	
	Elkins FSS (FAA)	636-4812	
	Elkins NOTAM	800-772-2666	
	Elkins Super 8	636-6500	
F			
	Karen Felton	291-0019	(in Parsons: 478-2208)
	Bob Frame	558-2204	
	Forest Service-Elkins	636-1800	
	Forest Service-Morgantown	285-1555	
G			
	Kate Goodrich	636-0144	
	Grant County AWOS	257-2477	
	GTE	800-356-6969	
H			
	Hermitage Motel	257-1711	
	Mike Herth	636-1926	
	Homestead Motel	257-1049	
	Clyde Hibbs (Radio Tech)	457-1852	
	Darrell Hinkel	703-999-3577	

J			
	Jennifer Johnson (WVDA P.I.O.)	588-2201	FAX 304-558-2203
K			
	Dana Keplinger	358-2366	
	Mike King, Novo Rep.	302-465-1907	VOICE 203-790-2694
L			
	Mike Ledden	636-5481 1800 478-2303	
	John Loftis (Elkins Airport Mgr.)	636-2726	FAX 636-8210
M			
	John McClure	905-764-3744	(PESTECHON)
N			
	Novo Customer Service	800-879-6686	(Dottie)
O			
	Oceana NAS (IR 720,714)	804-433-1228/1323	(Call before 1830, ask for Rob Williams or Harvill). Lt. Kirk to close MTR.
P			
	Stuart Park	636-3528	
	John Podgwaite (Gypchek)	203-230-4325	
	Potomac Ranger District	257-4488	
R			
	Dick Reardon	285-1566	FAX 303-285-1505
	Pierre Rouleau	802-868-7951	(PESTECHON)
	Pete Rush	599-9420	
	Bob Ruhe AG Service	419-943-3352	
S			
	Mary Saint Louis	636-5435	
	Tim Scherm	636-3897	
	Tom Schmidt	203-790-2695	
	George Sheets	456-3258	
	Spills (State Center)	1-800-642-3074	
	David Strahin	478-3015	
T			
	Jim Thomas	456-4005	
W			
	Keith Watson	703-999-3496	
	Washington NWS	703-260-0410/0109	
	Scott Wells	456-4565	
	Linda White	478-4277	
	Rod Whiteman	291-2001	
	Mike Willengorg	358-2158	
	Windancer (Jim/Sandy Dugan)	636-5591	
	Bob Wolf (S24A)	[illegible] 610-975	FAX 215-[illegible]-4200 610-975-4121
	Bill Woodland	636-6056	
	Wright-Patterson AFB	513-255-2207	
		513-257-6801/4270	Cpt. Zettlemoyer
	WV Welding	304-636-8920	(John/Ted)

APPENDIX F

RADIO GROUND/AIR COMMUNICATIONS

Communication is very critical during operations of this type. Ground-to-ground, ground-to-air, and air-to-ground operational communciations is a necessity in providing a safe environment during the project.

We will be using the MNF radio network this year. Be aware that there are similar problems with this low band network as those experienced with the high band system used in 1993 and 1994, Radio waves bounce off objects but travel much better when the path is clear. Ground crews will have more problems communicating than personnel in aircraft. Moving just a few feet may solve the problem. Sometimes it is necessary to go to higher ground. In mountainous country you have to learn to nurse the system. The aerial observer is equiped for communicating with the ground crews and should be able to assist in relaying messages.

During aerial spraying, it is critical to the operation that the activities and locations, of both aircraft and ground crews, are transmitted to the Operations Center Dispatcher for monitoring operations.

In the event of an accident, air or ground, it is critical to remain calm and act decisively. First transmissions should be to the Operations Center to report conditions. Then the Ops Center can provide assistance via radio or telephone to attain the appropriate help necessary. If you are in a position that you cannot contact the Ops Center, immediately contact the District Office closest the accident. Don't panic. If you follow this procedure, you are doing everything you possibly can do under these conditions. Don't waste time driving to the District Office to file a report where human welfare can be compromised. You are not prepared to move an injured body to a hospital as well as an ambulance crew. Use your head and use your radio. All other radio traffic should stay clear of any communication transmission during an emergency.

A separate handout concerning the operation and use of the portable radios is available. Ask your supervisor or the Operations Dispatcher for a copy.

MONONGAHELA NATIONAL FOREST RADIO FREQUENCIES:

AIR/GROUND	**123.45**					
AIR/AIR	**123.45**					
GROUND/GROUND	**38.55**	**RV**	**T1**	**38.81**	**T2**	**38.55**
WVDA	**159.225 (1)** **159.270**					

EMERGENCY LOCATOR TRANSMITTER (ELT) 121.500

APPENDIX G

JOB HAZARD ANALYSIS

USDA Forest Service JOB HAZARD ANALYSIS (Instructions on Reverse & Ref. FSH 6709.12)	1. Primary Job/Project GYPSY MOTH PROJECT	2. Location MONONGAHELA NATIONAL FOREST	3. Unit PPM - MNF
	4. Name of Analyst GARY BUSTAMENTE	5. Job Title of Analyst PROJECT LEADER	6. Date Prepared 04/22/95

7. Tasks/Procedures	8. Hazards	9. Abatement Actions Engineering Controls * Substitution * Admin Controls * PPE
Handling Heavy Tanks and Drums	Strains and Fractures	Use mechanical lifting devices, avoid strains, wear gloves and wear hard-toe boots.
Helium Tanks	Compressed Gas/Strains	Anchor tanks when transporting in vehicles; protect valves; avoid dropping. Escaping gas could cause container to become a projectile.
Filling Balloons with Helium	Balloon Rupture	Inspect balloon before inflation for defects; do not over-inflate.
Foot Travel	Fatigue	Divide heavy loads. Take breaks. Stay in shape.
	Night Travel	Recon during daylight. Use head lamps. Notify landowner in advance. Wear hard hat and eye protection.
	Getting Lost	Use landmarks for guidance. Follow land feature, i.e., streams. Trust the compass.
	Falling	Learn to fall. Wear good boots (8-inch tops, lug soles, leather).
	Hunting Seasons	Wear fluorescent colors.
	Forest Vegetation	Wear hard hats, eye protection, canvas clothing.
	Fences	Cross at gates or near posts; do not stretch wire. Avoid barbs with clothing; wear gloves. Consider all electric fences to be live.
Aircraft	Propeller	Stay at least 100 feet away from aircraft. Approach only with approval of pilot.
Handling Pesticides	Exposure	Flag handling area and post signs; have wash and first aid equipment on site.
	Hypersensitivity	Hypersensitive people should not be employed for the project.
	Mixing	Eye protection and gloves are required. Head cover and respirators are optional.
Exposure to:	Gypsy Moths	Hairs from moths can cause irritations to the skin and airway. Wear long-sleeved shirts and use respirators if hairs are in the air.
	Biting/Stinging Insects	Blouse pants; wear long-sleeved shirts; apply repellant; check for ticks frequently.
	Poison Ivy	Ivy prevention cream before exposure is optional. Wash affected area. Wash clothes separately.
	Poisonous Snakes	Wear high top leather boots; loose fitting clothes; watch where stepping. Bite victims should be taken to hospital rather than treated in the field.
		Snake chaps are optional.
Vehicle Travel	Good Conditions	Limit speed; plan your route; watch for objects in your path, i.e., deer, children, rocks, etc.; drive defensively; wear seat belts.
	Reduced Visibility Conditions Due to Poor Light, Rain, Dust, Fog, Etc.	Drive with lights on all of the time when visibility is reduced. Wear seat belts. Drive defensively.

10. Approved by	11. Title	12. Date

Previous edition is obsolete (over) FS-6700-7 (2/94)

APPENDIX H

TOXICOLOGY PROFILES

Attached are the Material Safety Data Sheets (MSDS) for the compounds being used.

Foray® 48B

Flowable Concentrate

Forest, Trees and Shrubs

KEEP OUT OF REACH OF CHILDREN

CAUTION

If in eyes, flush with plenty of water. Get medical attention if irritation persists.

ACTIVE INGREDIENT:

Bacillus thuringiensis subsp. *kurstaki*, 10,600 International Units (IU)/mg product (equivalent to 48 billion IU/GAL.)..... 2.1%

INERT INGREDIENTS.....97.9%

TOTAL.....100%

PRECAUTIONARY STATEMENTS: *HAZARDS TO HUMANS AND DOMESTIC ANIMALS:* May cause eye irritation. Avoid contact with skin, eyes, open wounds or clothing. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT: Applicators and other handlers should wear: Long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENVIRONMENTAL HAZARDS: Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE: It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or parks, or on golf courses or lawns and grounds.

Not for use on trees being grown for sale or other commercial use, or for commercial seed production, or for the production of timber or wood products, or for research purposes.

FORAY contains the spores and endotoxin crystals of *Bacillus thuringiensis kurstaki*. FORAY is a stomach poison and has high specific activity against lepidopterous larvae. After ingestion, larvae stop feeding within hours and die 2-5 days later. Maximum activity is exhibited against early instar larvae. FORAY 48B Flowable Concentrate may be used for both ground and aerial application. The product should be shaken or stirred before use. Add some water to the tank mix, pour the recommended amount of FORAY 48B into the tank and then add the remaining amount of water to obtain the proper mix ratio. Agitate as necessary to maintain the suspension. The diluted mix should be used within 72 hours.

Ground Application: Use an adequate amount of tank mix to obtain thorough coverage without excessive run off. Use the recommended per acre dosages of FORAY 48B in the following amounts of water:

High volume hydraulic sprayers	100 gallons
Mist blowers	10 gallons

Aerial Application: FORAY 48B may be applied aerially, either alone or diluted with water at the dosages shown in the application rates table. Spray volumes of 32-128 ounces per acre are recommended. Best results are expected when FORAY 48B is applied to dry foliage.

PREHARVEST INTERVAL: FORAY may be applied up to and including the day of harvest.

STORAGE AND DISPOSAL: Do not contaminate water, food or feed by storage or disposal of waste.

Storage: Store in a cool, dry place. Keep containers tightly closed when not in use. Store in temperatures above freezing and below 32 degrees C (90 degrees F).

Pesticide Disposal: Pesticide waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility in accordance with federal and local regulations.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

APPLICATION RATES:

Crop	Pests	Rate* (pts/acre)	Dosage* (BIU/Acre)
Forests, Shade Trees, Ornamentals, Shrubs, Sugar Maple Trees, Ornamental Fruit, Nut and Citrus Trees	Gypsy moth	1.3-6	8-40
	Spruce budworm, browntail moth, Douglas fir tussock moth, coneworm	1.3-5	8-30
	Tussock moths, pine butterfly, bagworm, leafrollers, tortix, mimosa webworm, tent caterpillar, jackpine budworm, black headed budworm, elm spanworm, saddled prominent, saddleback caterpillar and hemlock looper	1-2.7	6-16
	Redhumped caterpillars, spring and fall cankerworm, California oakworm, fall webworm	0.7-1.3	4-8

* Use the higher recommended rates on advanced larval stages or under high density larval populations.

WARRANTY: NOVO NORDISK MAKES NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PURPOSE, OR OTHERWISE, EXPRESS OR IMPLIED, concerning this product or its uses which extend beyond the use of the product under normal conditions in accord with the statements made on this label. In no case shall the seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer.

SPECIMEN LABEL

EPA Registration No. 58998-7
EPA Est. No. 58998-DN-002

FORA93/NoCommWPS

MANUFACTURED FOR:
Novo Nordisk
33 Turner Road
Danbury, Connecticut 06813-1907

NET CONTENT
(U.S. GALLONS)

MATERIAL SAFETY DATA SHEET **FORAY® 48B**

Date of Issue: 3/92; Revised 09/94

1. Identification of the Preparation and of the Company

Manufacturer:
Novo Nordisk A/S
Novo Alle
DK-2800 Bagsvaerd, DENMARK

US Office:
Novo Nordisk Bioindustrials Inc.
33 Turner Road
Danbury CT 06813-1907

Telephone: (203) 790-2600 Telefax: (203) 790-2748 Emergency No.: (800) 424-9300

Product Name: Foray® 48B
Product Code: 601-7500
EPA Registration No.: 58998-7
Einecs Number: 3808.10.90.0

Description: Biological insecticide. Aqueous suspension of Bacillus thuringiensis Berliner subsp. kurstaki spores and protein crystals.

2. Composition/Information on Ingredients

	wt%	CAS Registry No.	TLV/PEL
Bacillus thuringiensis subsp. kurstaki active crystal protein	2.2	68038-71-1	Non-hazardous
Inert ingredients	97.8	Trade secret	Not established

3. Hazards Identification

Emergency Overview: Keep out of reach of children. Avoid inhalation and contact with skin or eyes.
Acute Effects: Inhalation: None known to exist.
Skin absorption: Not known.
Skin/Eye contact: Transient irritation may occur.
Swallowing: None known to exist.

4. First Aid Measures

Ingestion: Rinse mouth and throat with clear clean water.
Skin: Flush skin with plenty of soap and water.
Inhalation: Remove from exposure.
Eyes: Flush with plenty of water.
Get medical attention, if irritation persists.

5. Fire-fighting Measures

Special Fire Fighting Procedures: None.
HMIS Rating: Health = 0, Flammability = 1, Reactivity = 0
Extinguishing Media: Water, foam, halones.
Fire and Explosion Hazards: None known.

6. Accidental Release Measures

Avoid inhalation of dust or aerosols. Avoid skin and eye contact.
After spillage: Spilled product should be removed immediately to avoid formation of dust from dried product. Take up by mechanical means. Spillage should be rinsed or vacuumed. Dilute remainder with plenty of water. Provide for sufficient ventilation.

7. Handling and Storage

Avoid formation of dust or aerosols during handling/pouring. Avoid splashing and high pressure washing. Provide for good ventilation of the room, when handling this product. Store container in a cool place (Preferably at 40 - 50°F). If stored at max. of 40° F the shelf-life of the product is two years.

8. Exposure Controls/Personal Protection

Respiratory Protection: Use when handling dust or aerosols.
Hand Protection: Water-proof gloves.
Eye Protection: Protecting glasses or eye shield, as appropriate.
Ventilation: Local exhaust as necessary to reduce, prevent, and control dust exposure.
Other: Long-sleeved shirt and pants and shoes plus socks.

9. Physical and Chemical Properties

Color: Light brown
Form: Suspension
Solubility, water: Readily mixable
Suspensibility: Greater than 80% after 30min.
Odor: Pungent, bacterial odor.
Relative density: 1.12 - 1.20 g/cm$_3$
pH-value: 4.1 - 4.8 (in 10% solution)

10. Stability and Reactivity

Foray 48B is chemically not reactive. This product is stable and hazardous polymerization will not occur. No hazardous combustion or decomposition products are known. Product is not known to be incompatible with any packing material.

11. Toxicology Information

	EPA toxicity Category
Oral LD_{50}: > 5000 mg/kg body weight	Category IV
Eye Irritation: Mild irritation. Reversible within 7 days.	Category III
Dermal LD_{50}: > 2500 mg/kg body weight	Category III
Inhalation LC_{50}: > 6.81 mg/l of air	Category IV
Skin Irritation: Slight skin reactions up to 24 hours after treatment	Category IV

12. Ecological Information

Studies on non-targets have been performed without identifying any organisms at risk. The following species have been included in the testing:

Mammals (Rats, Rabbits), Freshwater aquatic invertebrate (Daphnia magna, Rainbow Trout), Birds (Mallard Duck, Bobwhite), Non-target insects (Green Lacewing Larvae, Hymenopteran Pedibus Foveolatus, Ladybird Beetles, and Honey Bees.

13. Disposal Considerations

Do not contaminate water when disposing of equipment washwater or disposal of waste. Dispose of waste and containers in accordance with current local and federal regulations.

14. Transport Information

IMDG (Sea): Unclassified pesticide, non-hazardous biological product.
IATA (Air): Ok for passenger aircraft.
HS Code: 3808.10.90.0
UN Class: Exempt from UN-classification.

15. Regulatory Information

Keep out of reach of children.
Keep away from food, drink and animal feed.
Keep in a cool place.
To be used as an insecticide against Lepidopterous species according to national label recommendations.

16. Other Information

For information on re-entry and pre-harvest interval confer national label recommendations.

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.

All goods supplied by Novo Nordisk A/S are of high grade and are believed to be suitable for the recommended purposes, but as control cannot be exercised over their storage or use, no responsibility will be accepted for any damage or injury whatsoever arising from their storage, handling, application, or use.

MATERIAL SAFETY DATA SHEET

CARRIER 038

Date of Issue: 11/94

1. Identification of the Preparation and of the Company

Manufactured For:
Novo Nordisk
33 Turner Road, P.O. Box 1907
Danbury, CT 06813-1907

Telephone: (203) 790-2600
Telefax: (203) 790-2748
Emergency No.: (800) 424-9300

Product Name: Carrier 038

Product Code: 610-5100

Description: Adjuvant.

2. Composition/Information on Ingredients

	weight %
Water	58.8
Surfactants, diluents, emulsifiers, humectants	41.0
Preservatives	0.2

3. Hazards Identification

Emergency Overview: Keep out of reach of children. Avoid inhalation and contact with skin or eyes.

Acute Effects

Inhalation: None known to occur.
Skin absorption: Not known to occur.
Swallowing: None known to exist.
Skin/Eye contact: Transient irritation may occur.

4. First Aid Measures

Ingestion: Rinse mouth and throat with clear clean water.
Skin: Flush skin with plenty of soap and water.
Inhalation: Remove from exposure.
Eyes: Flush with plenty of water.
Get medical attention, if skin or eye irritation occurs and persists.

5. Fire-fighting Measures

Special Fire Fighting Procedures: None.
HMIS Rating: Health = 0, Flammability = 1, Reactivity = 0
Extinguishing Media: Water, foam, halones.
Fire and Explosion Hazards: None known.

6. Accidental Release Measures

Avoid skin and eye contact.
After spillage: Spilled product should be removed immediately to avoid formation of dust from dried product. Take up by mechanical means. Spillage should be rinsed or vacuumed. Dilute remainder with plenty of water. Provide for sufficient ventilation.

7. Handling and Storage

Avoid splashing and high pressure washing. Provide for good ventilation of the room, when handling this product. Store container in a cool place.

8. Exposure Controls/Personal Protection For Handlers

Respiratory Protection: Minimal protection recommended.
Hand Protection: Gloves of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or viton.
Eye Protection: Protecting glasses or eye shield, as appropriate.
Ventilation: Local exhaust as necessary to reduce exposure.
Other: Long-sleeved shirt and pants and shoes plus socks.

9. Physical and Chemical Properties

Color: Dark brown
Form: Aqueous suspension
Solubility, water: Dispersible in water
Bulk Density: 9.2 lbs/US gallon
pH-value: 6.0

10. Stability and Reactivity

Carrier 038 is not known to be chemically reactive, but it is recommended that it be kept separate from oxidizing agents and strong acids. Some components are known to produce hazardous products upon burning.

11. Toxicology Information

The individual components of Carrier 038 have been tested by the suppliers and no toxic effects from Carrier 038 would be expected.

12. Ecological Information

There are no known non-target effects of Carrier 038.

13. Disposal Considerations

Do not contaminate water when disposing of equipment washwater or disposal of waste. Dispose of waste and containers in accordance with current local and federal regulations.

14. Transport Information

IMDG (Sea): Unclassified mixture.
IATA (Air): O.K. for passenger aircraft.
UN Class: Exempt from UN-classification.

15. Regulatory Information

Keep out of reach of children.
Keep away from food, drink and animal feed.
be used as an adjuvant for forestry use with Gypcheck NPV.
the components of Carrier 038 are approved by EPA as inert ingredients and exempt from tolerance for use i
des applied to growing food crops.

16. Other Information

The i... presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.
All goods supplied by Novo Nordisk A/S are of high grade and are believed to be suitable for the recommended purposes, but as control cannot be exercised over their storage or use, no responsibility will be accepted for any damage or injury whatsoever arising from their storage, handling, application, or use.

MATERIAL SAFETY DATA SHEET[1]

(Form "Essentially Similar" to OMB No. 1218-0072)

PRODUCT NAME: GYPCHEK GYPCHEK	CHEMICAL NAME: Nucleopolyhedrosis Virus of *Lymantria dispar*, The Gypsy Moth
FORMULA: As a biological organism, this a.i. does not lend itself to characterization by normal pesticide criteria.	MOLECULAR WEIGHT: N/A
SYNONYMS: N/A	CHEMICAL FAMILY: N/A

I. PHYSICAL DATA

BOILING POINT: N/A	FREEZING POINT: N/A
SPECIFIC GRAVITY ($H_2O=1$): N/A	VAPOR PRESSURE (mm Hg.): N/A
VAPOR DENSITY (AIR=1): N/A	EVAPORATION RATE (Butyl Acetate=1): N/A
% VOLATILES BY VOLUME: N/A	SOLUBILITY IN WATER (% by wt.): Insoluble

APPEARANCE AND ODOR:
Dried insect body parts and virus polyhedra.

II. HAZARDOUS INGREDIENTS

MATERIAL	PERCENT	TLV (Units)
N/A		

III. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): N/A	FLAMMABLE LIMITS. N/A

EXTINGUISHING MEDIA:
Water on burning container.

SPECIAL FIRE FIGHTING PROCEDURES:
None except to avoid inhalation of particulates released by fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
N/A

[1] Prepared in compliance with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE:	Not established.
EFFECTS OF OVEREXPOSURE:	None known.
EMERGENCY AND FIRST AID PROCEDURES:	Remove from exposure situation.
NOTES TO PHYSICIAN:	Allergies and/or hypersensitivity may occur in some individuals.

V. REACTIVITY DATA

STABILITY: UNSTABLE ☐ STABLE ☒

CONDITIONS TO AVOID	Do not store in sunlight or at high temperatures.
INCOMPATIBILITY (materials to avoid	N/A
HAZARDOUS DECOMPOSITION PRODUCTS	N/A

HAZARDOUS POLYMERIZATION: MAY OCCUR ☐ WILL NOT OCCUR ☒

CONDITIONS TO AVOID	None

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Containment and cleanup by placing in a sealable container for transport to an approved landfill or other disposal site.
WASTE DISPOSAL METHOD	Burn bags or triple rinse containers and dispose them and excess product at an approved site.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)	Use normal work clothing and medical face mask as appropriate.
VENTILATION: LOCAL EXHAUST	N/A
MECHANICAL (general)	N/A
PROTECTIVE CLOTHING:	Goggles and face mask as appropriate.
OTHER PROTECTIVE EQUIPMENT:	None except to have eyewash, soap, and water available.

VIII. SPECIAL PRECAUTIONS

PRECAUTIONARY LABELING	**Keep out of reach of children.** **For use only in USDA-FS-supervised projects.** **Avoid direct application to water.** **Do not contaminate water by inappropriate disposal.**
OTHER HANDLING AND STORAGE CONDITIONS	**Avoid heat and sunlight.** **Dispose in approved sanitary landfill or by incineration, as allowed by State and local authorities.** **Do not reuse "empty" containers.**

DEPARTMENT OF TRANSPORATION	HAZARD CLASSIFICATION	Non-hazardous, non-toxic
	SHIPPING NAME	Nucleopolyhedrosis Virus
EPA REGISTRATION #	27586-2	
NAME	Nucleopolyhedrosis Virus	

The USDA Forest Service (FS) believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted. The data are not to be taken as a warranty or representation for which the FS assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State and local laws and regulations.

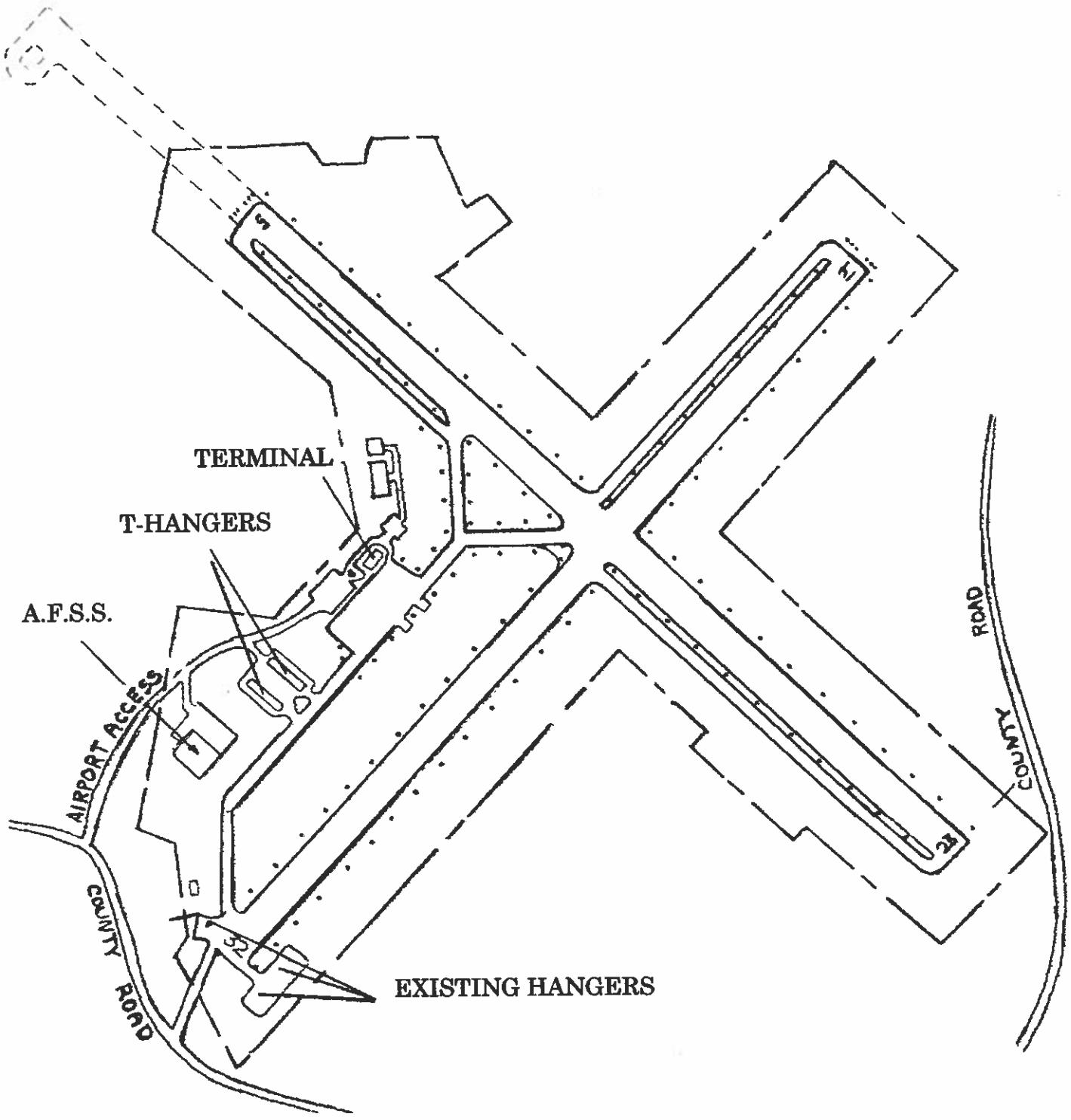
USDA Forest Service
P.O. Box 96090
Washington, DC 20090

Emergency Telephone No. (202) 837-8570

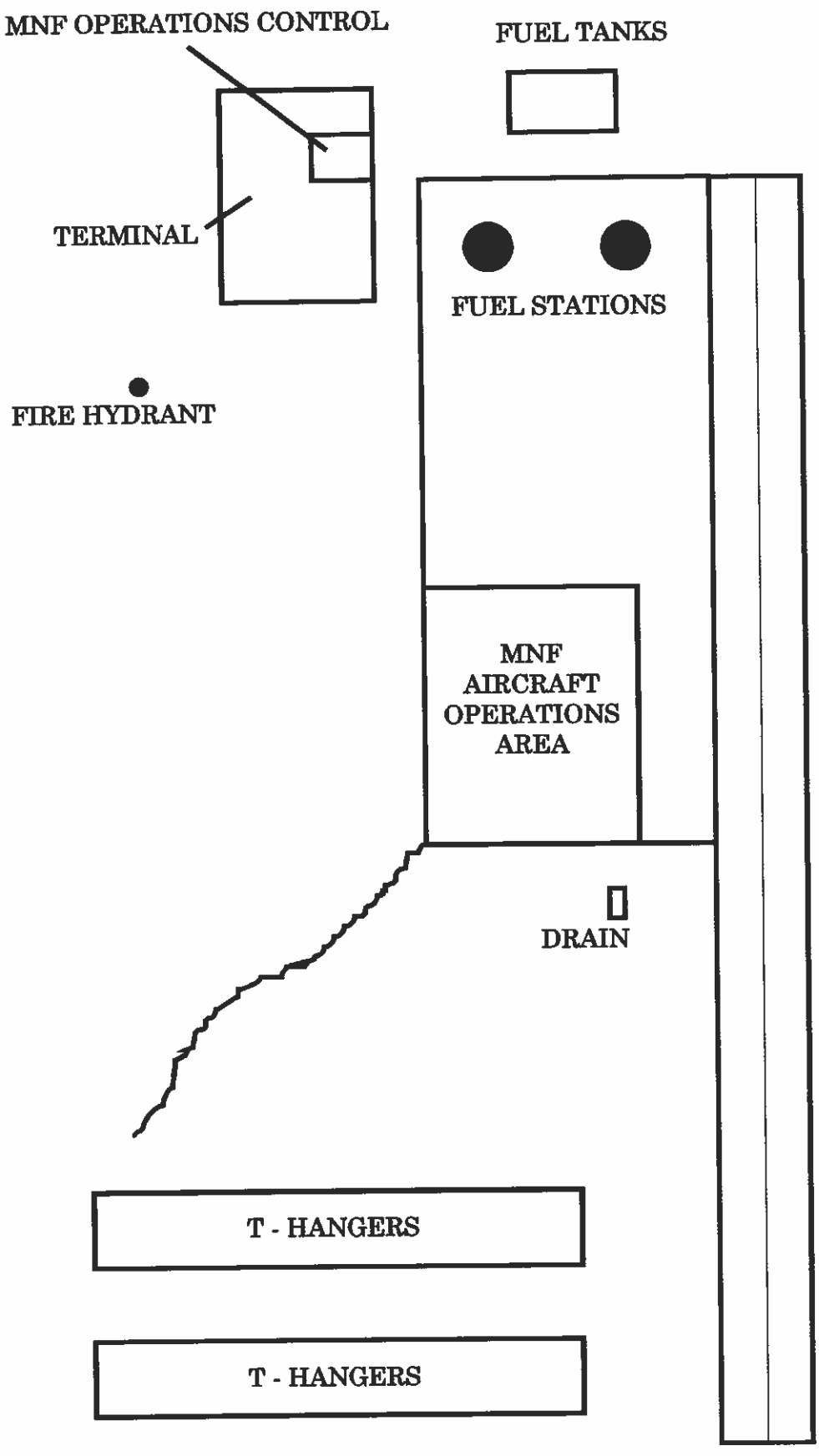
APPENDIX I

ELKINS AIRPORT

Appendix I
Elkins Airport



Appendix I (continued)
Elkins Airport



APPENDIX J

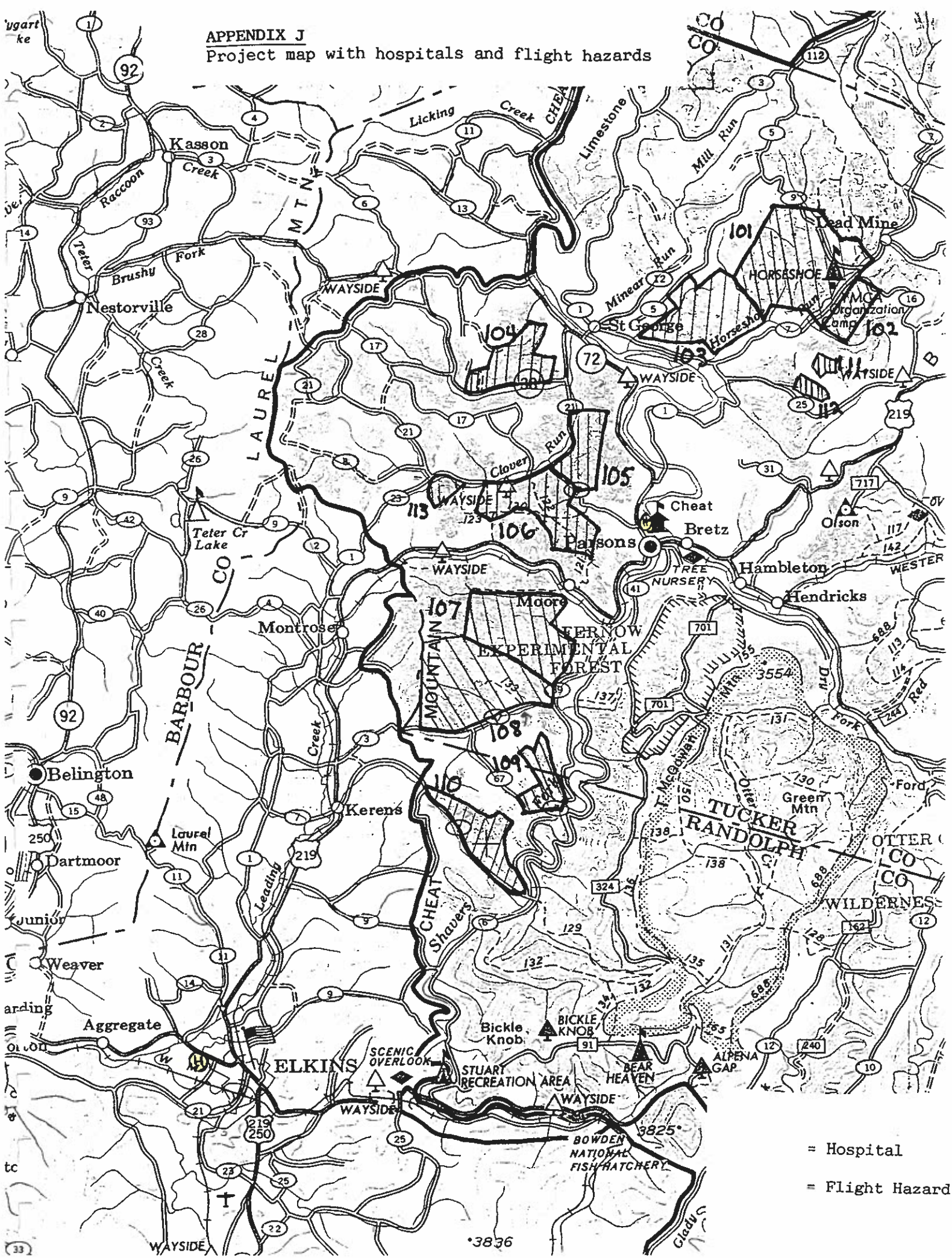
PROJECT MAP

with

Locations of HOSPITALS and AIRCRAFT HAZARDS

APPENDIX J

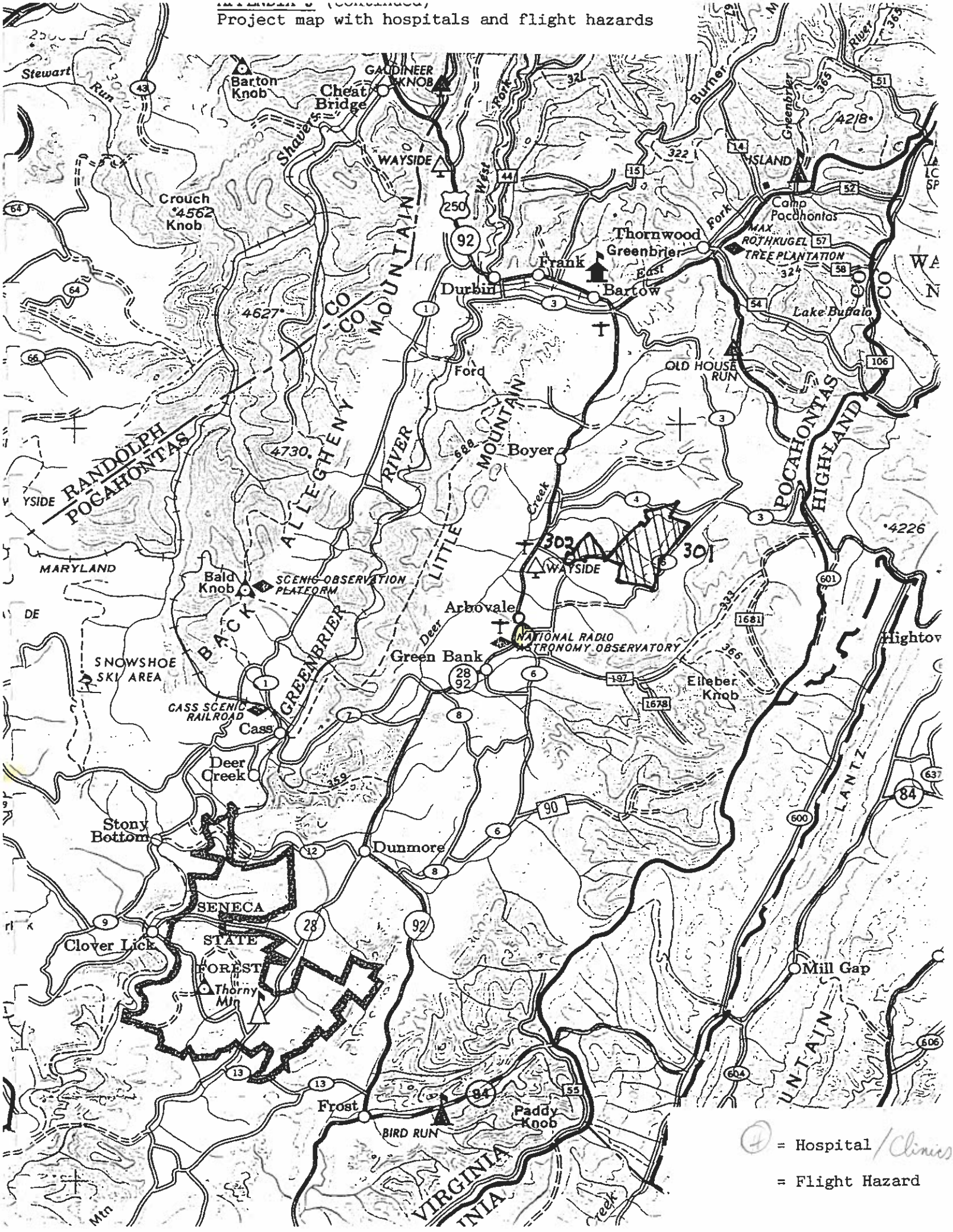
Project map with hospitals and flight hazards



= Hospital

= Flight Hazard

Project map with hospitals and flight hazards

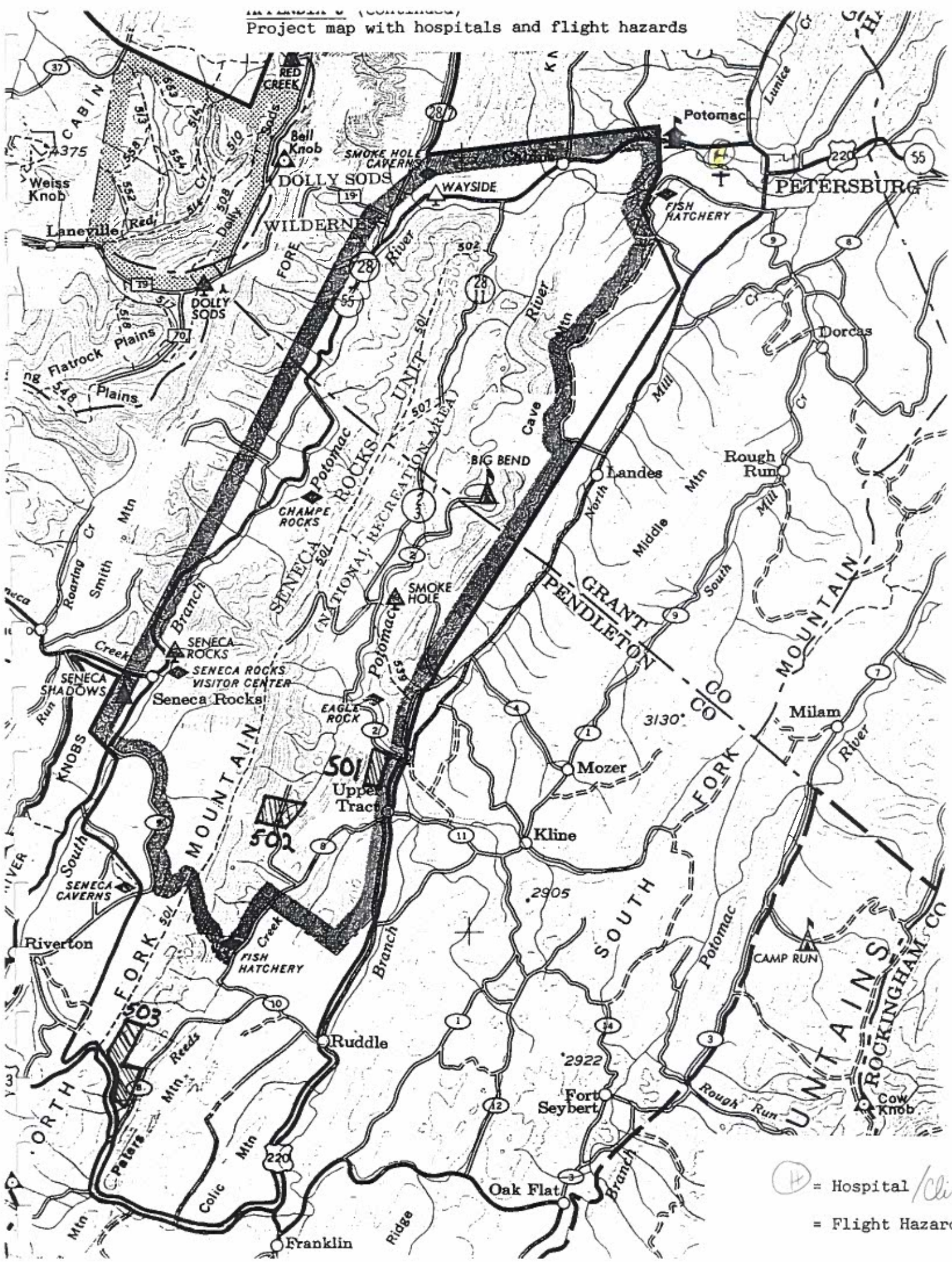


= Hospital / Clinics

= Flight Hazard

EXHIBIT 8 (continued)

Project map with hospitals and flight hazards



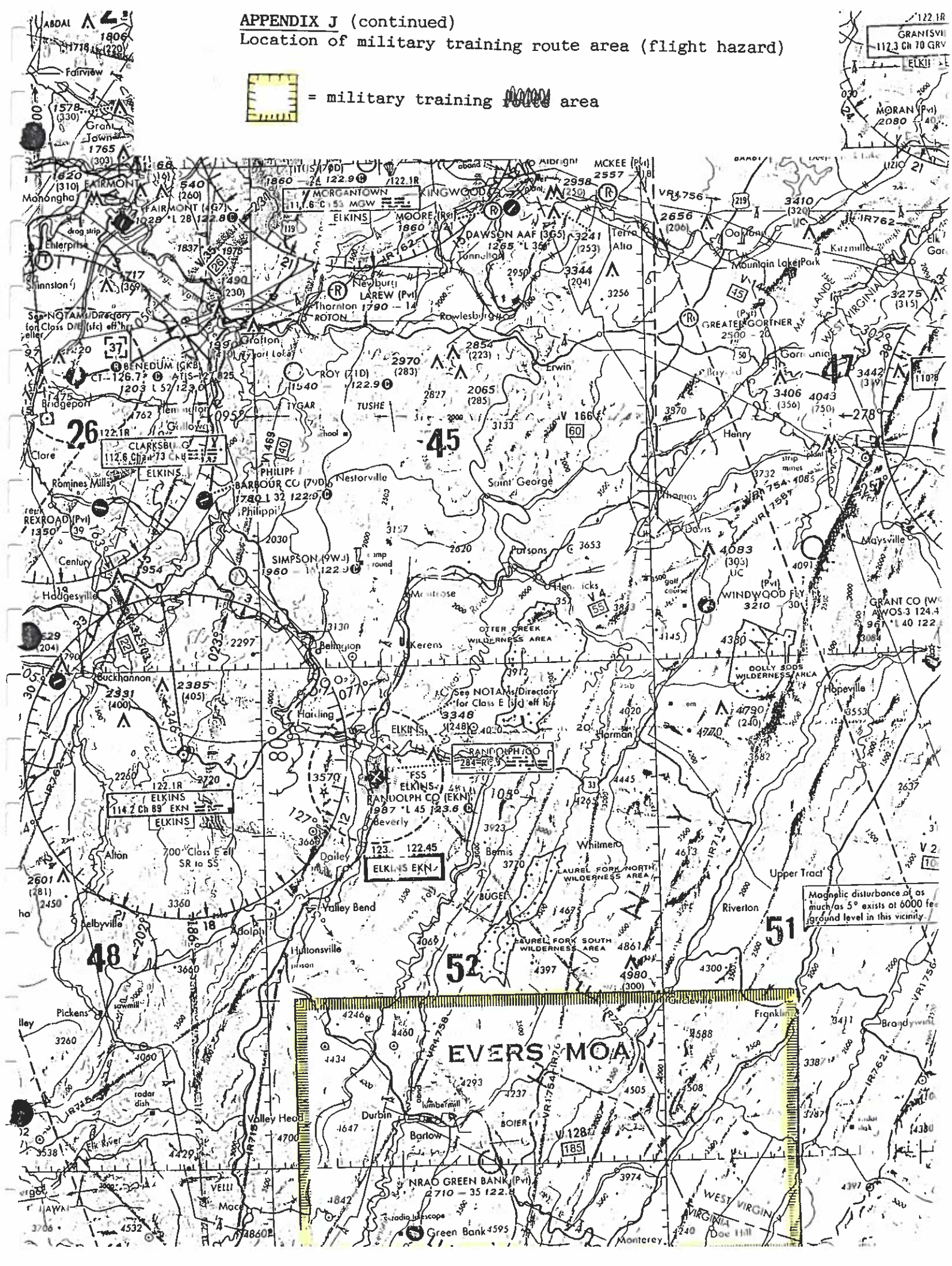
(H) = Hospital / Clinic

= Flight Hazard

APPENDIX J (continued)

Location of military training route area (flight hazard)

= military training route area



APPENDIX K

DISTRIBUTION OF PLAN

In order to send the message that Safety is extremely important during these projects, the following personnel/offices have received a copy of this plan.

1	R-9 Regional Aviation Officer	Greg Frederick
1	Public Service Group	Steve Chandler/K.Goodrich
1	Technical Services Group	Mike Herth
1	Administration Services Group/Safety Officer	Ben Backus
1	Forest Supervisor	Jim Page
1	Forest Receptionist	Nancy Barrett
1	Cheat Ranger District	Bill Woodland
1	Potomac Ranger District	Nancy Feakes
1	Greenbrier Ranger District	Acting District Ranger
2	Forest Health Protection Morgantown	P.Rush:S24L08A R.Whiteman:S24L08A
1	NAGE Representative Local R4-88	D.Pingley
10	Copies for each crewmember	
1	Extra file copy	